

## **REMARKS**

Claims 1-23 are now pending in the application. Claims 1-23 stand rejected. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **REJECTION UNDER 35 U.S.C. § 102**

Claims 1-9, 13-14, 16 and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Heckerman et al. (U.S. Pat. No. 6,633,852). This rejection is respectfully traversed.

Heckerman et al. is generally directed toward a preference-based catalog browser that utilizes a belief network. In particular, Heckerman et al. is directed toward construction and use of a belief network based on observed attributes of previous customers or test subjects that can be used to predict current user preferences when given values of the attributes for a current user. For example, Heckerman teaches:

receiving a belief network containing attribute nodes and preference nodes, the attribute nodes reflecting the attributes of the available products ... the preference nodes reflecting the available products, each preference node having a probability distribution indicating the likelihood that the available product is the desired product of the user given a value of at least one of the attribute nodes

(column 17, lines 35-43). Heckerman also teaches:

network generator 312 is responsible for generating a belief network based on ... prior knowledge 318 and information contained within ... database 316. After generating the belief network, ... network generator 312 passes the belief network to the preference-based browser 314 which utilizes the belief network to determine the user's preferences for products

(column 6, lines 42-48). Additionally, Heckerman et al. teaches "prior knowledge 318 includes a belief network with all variables being binary and with arcs between the variables" (column 6, lines 53-55). Further, Heckerman et al. teaches:

FIG. 5 depicts the database 316 ... database 316 contains a number of records 502, 504, and 506 which are each referred to as a case ... Each case 502, 504, 506 indicates observed data for a particular user ... Each case typically contains a value for each variable in the belief network ... For example, case 502 reflects a user who is a child ... who has a low income ... and who has an interest in a heavy laptop ... with maximum RAM less than 32 Megabytes and with the cheapest power supply available ... The buyer reflected by case 502 liked both laptop 1 and laptop 2 and disliked both laptop 3 and laptop 4.

(column 9, lines 15-31).

In rejecting the independent claims, the Examiner considers database 316 (database of cases) to be a database of products having qualitative attributes assigned to the products that reflect information about potential users of the products. However, the database of cases actually records empirically obtained learning about observed relationships between user attributes and specific products. The database of cases can then be combined with the graph data structure of the initial belief network of the prior knowledge 318 to obtain a belief network that is useful for predicting user preference for a product based on empirically obtained user attribute values. Accordingly, Heckerman et al. does not teach a database of products having qualitative attributes that are easy for a manufacturer to subjectively initialize and edit, but rather requires a complex definition process directed by an administrator (column 9, line 65 – column 10, line 8).

In particular, Heckerman teaches:

The first step performed in the learning process is for the administrator to construct an initial belief network (step 702). In this step, the administrator determines the available preferences or products that the system may choose for a user (e.g., laptop 1, laptop 2, laptop 3, and laptop 4). Then, the administrator consults with an expert to determine any causal attributes that have a causal effect on the preferences and for which data (or observations) are available. For example, the observations may be derived from a buyers' survey which indicates various demographic information for a number of buyers and the products that these buyers selected. After receiving this information, the administrator constructs an

initial belief network with causal attributes, caused attributes, and at least one hidden attribute, like the one shown in FIG. 8. The initial belief network 800 contains causal attributes 802 and 804, a hidden causal attribute 806, and caused attributes 808-814 that reflect the preferences for products to be predicted by the preference-based browser.

(column 10, lines 9-28). Heckerman et al. teaches that attributes have to be expertly identified and automatically, initially assigned to products by gathering and applying empirical data. As a result, manufacturer's are not empowered to enroll products in the database simply by selectively assigning predefined qualitative attribute classes to the products in a subjective categorization process, immediately resulting in a capability to select the enrolled products based on specification of user qualitative attributes. Nor are manufacturers empowered to edit the selective assignment of the qualitative attributes to the product classes over time.

Applicants' claimed invention is generally directed to a networked product selection system. In particular, Applicants' claimed invention is directed to a product selection system employing a database of products having predefined qualitative attributes selectively assigned to them in a subjective categorization process, and providing an expert system that poses questions to the user based on the predefined qualitative attributes. Specifically, independent claims 1 and 14 as amended recite "a database of products having qualitative attributes subjectively assigned to the products". Support for the amendments may be found in the specification as originally filed at paragraphs 0039 and 0040, which state in relevant part, "Whereas the quantitative attributes once assigned cannot be changed unless the actual product itself changes, the qualitative attributes are subject to amendment and elaboration by the manufacturer

... One or more of the attributes may be assigned to each product.” Thus, the assignment of the qualitative attributes is subjective.

These differences are significant because a manufacturer is empowered to enroll products in the database simply by selectively assigning predefined qualitative attribute classes to the products in a subjective categorization process, immediately resulting in a capability to select the enrolled products based on specification of user qualitative attributes. Also of significance, manufacturers are empowered to edit the selective assignment of the qualitative attributes to the product classes over time.

Therefore, Applicants respectfully request the Examiner withdraw the rejection of independent claims 1 and 14 under 35 U.S.C. § 102(e), along with rejection on these grounds of all claims dependent therefrom.

#### **REJECTION UNDER 35 U.S.C. § 103**

Claims 10-11, 15 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heckerman et al. (U.S. Pat. No. 6,633,852) in view of admitted prior art. This rejection is respectfully traversed.

Applicants respectfully refer the Examiner to Remarks made above with respect to Rejection under 35 U.S.C. § 102.

Accordingly, Applicants respectfully request the Examiner withdraw the rejection of claims 10-11, 15 and 19 based on their dependency from allowable base claims.

Claims 12, 17, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heckerman et al. in view of Official Notice. This rejection is respectfully traversed.

The Examiner takes Official Notice that a user's skill level is an old and well-known characteristic of a user, such that it would be obvious to modify Heckerman et al. to include skill level. While Heckerman et al. teaches empirically expressible user attributes such as age and income, Heckerman et al. does not teach, suggest, or motivate use of subjectively perceived attributes, like skill level. In contrast, Applicants' claimed invention teaches how to obtain such information in a way that is meaningful to customers and to manufacturer's at paragraph 0040. In particular, skill level is presented as a bivalent, continuous spectrum, and more than one attribute on the spectrum can be subjectively assigned to a product. Moreover, Applicants respectfully refer the Examiner to Remarks made above with respect to Rejection under 35 U.S.C. § 102.

Accordingly, Applicants respectfully request the Examiner withdraw the rejection of claims 12-17, and 18 based on their dependency from allowable base claims, and further in view of the subjective nature of skill level attributes.

Claims 21-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heckerman et al. (U.S. Pat. No. 6,633,852) in view of [www.surprise.com](http://www.surprise.com). This rejection is respectfully traversed.

For discussion of Heckerman et al., Applicants respectfully refer the Examiner to Remarks made above with respect to Rejection under 35 U.S.C. § 102. The disclosure related to [www.surprise.com](http://www.surprise.com) reveals a website having a user interface with labeled hyperlinks for occasions, categories of recipients, and recipient attributes. Individuals are permitted to enroll a product available for purchase anywhere on the web as a gift idea, although details of the enrollment procedure cannot be obtained through the

Internet Archive. Clicking on a hyperlink returns a set of products, plus additional hyperlinks for user attributes “related” to the user attribute previously selected. However, clicking on a new hyperlink merely returns a completely different set of products. Accordingly, selection is not based on multiple user answers, since users cannot select multiple attributes, and since subsequent selection does not filter the results returned from the previous selection. In contrast, independent claims 1 and 14 recite “an expert system posing questions over the user interface to the shopper and querying the database in response to **answers** to the questions” (emphasis added). These differences are significant. Also, [www.surprise.com](http://www.surprise.com) does not teach a method for assignment of attributes to products, so there is no teaching of subjective assignment.


Therefore, Applicants respectfully request the Examiner withdraw the rejection of independent claims 21-23 under 35 U.S.C. § 103(a) due to their dependence from allowable base claims.

**CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: October 27, 2004

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